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THE MAGAZINE OF THE SOCIETY FOR TECHNICAL COMMUNICATION

STRUCTURED AUTHORING

YOU'RE USING DITA, ARE YOU REALLY USING DITA?

CONTENT REUSE FROM THE LENSES OF REACTIVE AND PROACTIVE LEARNING

TEACHING USER DOCUMENTATION THROUGH STRUCTURED AUTHORING

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A Note from the Editor

Our May/June 2024 issue focuses on structured authoring methods and techniques, whether you're using DITA, developing interactive help documentation, exploring content reuse for training purposes, or teaching best practices for structuring user documentation. These articles explore different perspectives on structured authoring tools and content reuse strategies with some valuable takeaways for technical communicators. Also in this issue, you'll find interesting articles on the ISO Plain Language Standard, the Oxford comma, and a snapshot of recent online hiring trends in technical communication.

In this issue, I'm excited to present two new columnists and topics, which you'll see featured throughout the year. The first is *Instructional Design for Technical Communicators*, curated by Dr. Regina Purnell-Adams, who is Professor of Aerospace Studies at the University of Miami, and holds a doctorate in Technical Communication and Rhetoric. In this month's column, she discusses four guidelines for effective use of AI as writing tools in the classroom. Our other new featured column is *NextGen TechComm*, which will feature insights from new technical communication graduates and professionals on their unique journeys, interests, and insights related to the profession. Dr. Kylie Jacobsen, Assistant Professor at Grand Valley State University, will be curating this column and introducing us to a wide range of young professionals and perspectives.

Also new this month is the inaugural President's Letter from incoming STC President, Dr. Liz Herman. In her letter to the membership, she discusses the essential and inevitable role of change in promoting growth and opportunity in professional organizations, like STC. In the coming year, you can look forward to her insights on the Society and trends in the technical communication profession.

To see what else is coming this year, be sure to visit our editorial calendar found on the STC website at https://www.stc.org/intercom/editorial-calendar/ for more information. Upcoming issues on the calendar include strategic branding, sustainable content, and accessible design. If you would like to submit an article for publication on these or other technical communciation topic, or simiply have an idea or question, feel free to email us at intercom-editor@stc.org. ■

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You're Using DITA, But Are You Really *Using* DITA?

By Lou Kummerer | Senior Member

If you're planning on using DITA—it often entails more than simply setting up an infrastructure and training writers.

DITA offers a powerful range of capabilities, but those capabilities come at the cost of higher document complexity, greater resource demands, and longer production cycles. DITA's increased costs can be circumvented by simply not implementing some of its more challenging features. However, doing so seriously diminishes the true value of using DITA.

IBM originally proposed Darwin Information Typing Architecture (DITA) as a structured documentation model in the early 2000s. DITA has since become an industry-wide standard for structured content, especially among companies with high-volume documentation demands. Large corporations invest millions of dollars in DITA implementations, hoping to reap the benefits of a structured approach to content development.

However, DITA is complex and the toolsets that support it frequently have steep learning curves. Taking advantage of DITA's full range of capabilities incurs a cost in terms of time, resources, and complexity.

If you or your technical publications group are new to the DITA world, you may be tempted to avoid DITA's additional overhead by skipping some of its more challenging features. By doing so, you reduce DITA and its accompanying toolset to little more than an expensive authoring tool with a steep learning curve.

Four DITA features particularly prone to underuse are information typing, conditionalized content, re-use and variables.

Information Typing

Information typing requires that content be segregated according to its function. Each information type has a unique set of restrictions and formatting requirements. For instance, a section defining acronyms is formatted and organized differently from a section containing a procedure. Each information type is created in a separate module isolated from other information types. More importantly, the content of one information type is never comingled with the content of another type.

Information typing forces content into sections that have a clear, unadulterated purpose. It allows users to quickly find what they are looking for without having to slosh through a muddle of irrelevant information.

Information typing is encoded in DITA's genes. The DITA specification organizes basic information types into Concept, Task, and Reference topics, each of which defines XML elements unique to that type. For example, the DITA XML Steps element, which defines steps in a procedure, is unique to the Task topic.

However, information typing demands that you carefully analyze your writing projects to ensure that all content is segregated into the appropriate information types. Furthermore, organizing content into rigidly defined information types increases the complexity of the document.

Because DITA also provides a generic DITA topic module, you may be tempted to simplify your DITA documents by forcing all content into the generic topic rather than using separate topics for each information type.

The skilled writers in your group might still be able to impose a fuzzy version of information typing within each generic topic module. However, the output across several documents will likely be inconsistent. Moreover, new writers who aren't properly trained in information typing may revert to a more haphazard style where different information types are randomly intermixed, sometimes within the same paragraph.

Conditionalized Content

Conditionalization allows a single document to include mutually exclusive text variations, each aimed at a separate target audience. When the appropriate target audience is selected, only the text relevant to that group appears in the document. For example, documentation for a product marketed in both the U.S. and Europe may have measurements conditionalized so that when Europe is selected, all measurements in the document appear in metric format.

Most high-end authoring tools support some form of conditionalization, but few of them offer the same variety

and flexibility that DITA provides. In DITA, conditionalization can be applied to virtually any part of the document, including phrases, graphics, even entire sections.

Conditionalization provides an efficient means of documenting products that have multiple permutations, each with only minor differences, such as an embedded controller chip where the only product variation is the amount of onboard RAM. For such products, conditionalization eliminates the need for creating a separate document for each of the permutations or for creating a single document that includes information on all other permutations when only one permutation is relevant to the user.

However, conditionalization can quickly become unwieldy, especially when multiple factors are involved—for example, a DRAM device available in 1.5GHz and 2.0GHz versions, each of which offers 8GB, 16GB, or 32GB of RAM with either a 1.9-volt or 3.3-volt power requirement. Correctly coding all these permutations is challenging. Trying to unravel them when new material is added to an existing document can be even more challenging. In addition, creating specialized profiles and setting up their associated definition files can be daunting, especially for inexperienced DITA users.

Faced with the difficulties in implementing DITA conditionalization, your first instinct might be to revert to a less technically demanding solution. Doing so may simplify the editing process, but it doesn't eliminate the complexity. It only diverts it to another arena. Each variation must still be documented somehow.

If you create separate documents, each dedicated to a single permutation, the majority of the material in each of those documents will be common to all permutations. Changes to the common material will now have to be replicated in each of the separate documents. Tracking changes across each of the separate documents can easily become unmanageable.

On the other hand, if you force all the permutation material into a single document, you've passed the complexity onto your users. They must now forage through layers of irrelevant text to find the information specific to their needs.

Documenting products with multiple permutations is inherently complex. You can't eliminate the complexity. You can only select the most practical method of dealing with it. While DITA's conditionalization feature incurs an upfront editing cost, it is a less problematic long-term solution. It is also the most beneficial solution for your users, something that should be foremost in the mind of every technical writer.

Reuse

Reuse entails the ability to create a topic once and use the topic without further modifications in multiple documents. A structured document is a collection of individual topics, each created and stored as a separate file. The document's organization is controlled by a map file. The map contains links to the physical location of the topic files to be included in the document. The document is then generated by executing its map file.

A single topic module can be reused in multiple documents by linking the module into each document's map file. Changes to the module will automatically appear the next time the relevant documents' map files are executed.

DITA is structured by nature, requiring that individual topics be rendered as separate XML files that are subsequently linked into an XML map.

DITA is structured by nature, requiring that individual topics be rendered as separate XML files that are subsequently linked into an XML map. Furthermore, taking advantage of reuse opportunities in DITA is straightforward in a technical sense. Unlike more complex features such as conditionalization, reuse doesn't involve complex editing processes nor does it require in-depth technical skills. Nonetheless, this powerful feature often falls by the wayside for reasons that are outside the scope of DITA or its toolset.

Reuse can only be implemented effectively if each writer knows in advance which sections of a new document have already been created elsewhere. If your technical publications group assigns writers to develop entire documents independently (commonly referred to as "working in silos"), opportunities for reuse are lost because writers lack visibility into where sharing sections with other documents might be possible.

Variables

Many technical documents remain in use for extended periods before undergoing a revision. These documents frequently contain certain types of generic references that are subject to change without notification. For instance, a document may contain a URL that points to a customer support website where product manuals can be downloaded. If the website is reorganized and the downloadable document links are moved to a different page, all those URL references become invalid.

DITA variables provide a solution to this dilemma. Variables allow text to be defined in a single location and subsequently referenced indirectly in multiple locations. The actual value of the variable (in the example above, the URL for the downloadable manuals page) is resolved only when the document referencing the variable is generated. Thus, the value of the variable can be updated in a single location and will automatically be included in all documents when their map file is next executed.

Using DITA variables requires establishing a linkage between the location of the variable definition, the variable references in each of the topic modules, and the maps for each of the affected documents. Creating and validating those links can be time-consuming and occasionally frustrating. Furthermore, someone must be designated as the point of contact for updating the variables when a value changes. Managing the updating process adds another layer of administrative overhead to your group.

However, your users have a right to expect that the documentation you give them is accurate and up-to-date. DITA variables provide a means of assuring that all references in those documents remain current across each document's lifecycle.

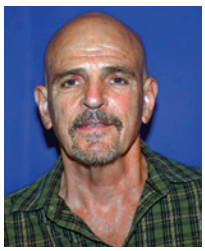
Conclusion

If you or your group are planning on using DITA—or if you're using DITA now in a limited fashion—be aware that fully utilizing DITA's powerful capabilities entails more than simply setting up the DITA infrastructure and training writers to create XML modules. You must also consider how DITA will affect the way you produce documentation and the way you train your writers.

To begin with, you must be prepared to re-center your production processes around a preliminary analysis phase. New projects coming into the department must be thoroughly examined up front to determine how the proposed documentation should be information-typed, where there are opportunities for reuse, and where variables and conditionalization may come into play. Work is then assigned to writers based on that analysis.

In addition, writers must be trained in more than the basic mechanics of creating DITA modules. Every writer in your group should have a firm understanding of structured documentation, what its benefits are, and how it should be implemented.

Changing your organization to take full advantage of DITA invariably requires the addition of time and resources to the document production cycle—something that management is generally loathe to do. Your biggest DITA implementation challenge may be convincing your organization to accept the increased overhead as an integral part of DITA's cost. When time and headcount are at a premium, that can be a formidable task. But it's a task that must be undertaken. Otherwise, you risk using DITA without really *using* DITA. ■



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Content Reuse from the Lenses of Reactive and Proactive Learning

By Julie Badger | Member

Effective content reuse strategies can be used to support a wide range of instructional design products, from basic help to advanced training.

Several years ago, I was faced with a complex issue that needed solving. My company had a documentation problem—multiple teams were writing documentation for different purposes, and customers weren't reading the documentation that the Documentation team created. Instead:

- Tech Support was writing one-off, step-by-step documentation to teach customers basic tasks in our software.
- Training was writing procedural content for the training workbooks they used in their live, in-person learning.
- Customer Success Managers were writing procedural and conceptual content for use during customer onboarding.
- Documentation was creating content for the software manuals, tomes really, that shipped as PDFs with the software.

This was not working. Customers rarely knew where to find answers to basic questions and struggled to retain the information they found. Collectively, we were spending hundreds and hundreds of hours writing the same or similar content. Our support burden was extremely high, and we couldn't hire support staff fast enough to meet the needs of our burgeoning customer base. Also, our content impression was rather embarrassing. Depending on the author, actual content given to customers contained inconsistent tone/voice/structure/styling. Documents were littered with misspellings, lacked punctuation, and were unprofessional.

As I analyzed the problem, I noted that our customers' information needs typically fell into one of two buckets: proactive learning and reactive learning.

Reactive Learning

Reactive learning needs encompass three sets of information:

- **UI Help** provides immediate assistance in context to ensure the user can continue working in the app. We defined the UI Help use case as follows:
  - I'm in the app right now, and I need to know what this field or form is and how do I use it.
- **Conceptual and Procedural Help** gives readers a high-level view of a feature or concept with step-by-step instructions to complete basic tasks. The goal is to ensure the user can immediately scan the topic to complete a task and get on with their day. We defined the Conceptual/Procedural Help use case as follows:
  - I need to do XYZ as part of my job. How do I do this in your application right now so that I can get on with my day? I don't have time to read 800-page manuals. I need to be able to "Google" it and find the answer to my question without having to call customer support.

Our customers' information needs typically fell into one of two buckets: proactive learning and reactive learning.

- **Workflow Help** serves a different purpose than Procedural Help. Workflow topics provide the "big picture" view of the system and procedures to complete a multi-part objective in the product. Workflow topics always start with a visual diagram of the tasks to complete a complex goal. The workflow diagram was hot-mapped to each of the procedures in the topic. Procedure sections were collapsed when a topic opened. The user could expand/collapse the procedures as they progressed toward the workflow goal. We defined the goal for workflow Help as follows:
  - I'm a customer and I need to be able to do XYZ in the system. What are the prerequisites? What is the workflow? What configuration settings are required? What are the procedures I need to complete to reach my goal?

Proactive Learning

Proactive learning needs include three sets of information:

- **Spot training** provides quick refreshers on a specific subject or a specific task that customers need to complete. We use call logs and trending support issues to drive the Spot Training course

priorities. When repeat issues arose, we wrote proactive micro-learning courses, called "On a Mission" to fill the gap and reduce call volume. The goal of Spot Training Help was to fill a knowledge gap, describe a specific procedure for a specific configuration, and reduce overall call volume. The use case for Spot Training was:
    - I'm trying to do XYZ in your application. I've done it before, but my memory is fuzzy. Where can I find bite-sized learning tools to refresh my memory or help me with a specific aspect or configuration of XYZ?
- **Fundamentals training** was 101-level coursework aimed at serving the learning needs of new customers (new to the product or new to the module). The goal of this material was to provide a solid foundation of knowledge for customers so that on Day One, post-Go-Live, they could do their job using our software. The use case was:
    - I'm starting from scratch. I need to understand the basic concepts, workflows, and procedures I'll complete using your application. I need video walkthroughs and simulations to help cement my knowledge. I need hands-on practice exercises that I can complete in the application at my own pace.
- **Advanced training** was targeted at System Administrators and Power Users. It was 201-level coursework; we expected the user to have been working in the system for some time and to need to know all aspects of the software. The use case for this training was:
    - I've been working in the application for a while. We're scaling up our operation and starting to use more complex features or workflows. I need to know how to configure the application and learn everything about the new features we're deploying.

After we identified the different types of information needs, we were able to build a content strategy that could meet our customers' needs and eliminate the creation of one-off content across departments. We did it in two phases:

- **Phase One**: Build a Help Center
- **Phase Two**: Build a Learning Center that reuses as much of the Help Center content as possible.

Phase One

We, largely, tossed the existing documentation. It provided only basic information about each UI element. It did not include conceptual information, procedures, or contextual information. The problem we faced was that we estimated that creating an initial release of a Help Center (i.e., an HTML5-based, online, searchable documentation portal) would take six months. Before we focused on building content in our new content tool, Flare, we beefed up the in-app help we included in our software application. Customers accessed this help by clicking a Help icon on any field or form, and descriptive text was displayed explaining the field or form and how to use it. Augmenting in-app Help provided cover giving us time to build the Help Center. We delivered the Help Center and used tools like Google Analytics to analyze user behavior, which topics were accessed the most, how long people were in the Help system, and other key indicators to help us better understand our customers' content needs.

After we identified the different types of information needs, we were able to build a content strategy that could meet our customers' needs and eliminate the creation of one-off content across departments.

Phase Two

The Help Center content met our customers' reactive learning needs. However, as the company continued to grow, our need for learning content also grew. Our lack of online training materials was limiting our ability to scale as a company. We needed a way to provide comprehensive training for new users, system administrators, and power users. We needed our training to be largely self-guided learning materials because our customers wanted to learn at their own pace. Additionally, keeping a bench of trainers who were willing to travel all over the country for 40+ weeks a year to do live on-site training was an impossibility.

We realized that we couldn't wait nine months to deliver the Learning Center. We needed it live in six months. We had a set of searchable reactive learning content. We needed to reuse as much Help content as possible if we were going to hit our dates:

- **Overview Content**: We reused our conceptual content from the Help Center in overview lessons. Also, in some cases, we used this same conceptual information from the Help Center as the basis for the script for overview videos.
- **Procedural Lessons**: We used step-by-step procedural help, from the Help Center content, as the basis for procedural lessons in the Learning Center. Customers could follow and complete procedural tasks in our software application at their own pace following the procedural lesson displayed in the Learning Center. After completing the procedure, they would return to the Learning Center to complete the next lesson for a course, typically a skills assessment.

The Nuts and Bolts of Reuse

Content reuse accelerated our Learning Center course development. A large portion of the procedural materials existed. We just needed to repackage it and make it available in a different form in the Learning Center. Instructional designers met with technical writers to discuss which parts of a given topic they wanted to include as a procedural lesson or overview lesson on the Learning Center. In some cases, they also identified insights that they wanted to provide to customers, which would not be relevant in the Help. For example, curriculum objectives would not be relevant in a Help Center procedure but would be important for a lesson in the Learning Center. In Flare, the writers conditionalized content in the following manner:

- **LC**: Content exclusively meant for use in a procedure lesson in the Learning Center.
- **HC**: Content exclusively meant for use in the Help Center.
- **No conditions applied**: Content that would be published in both the Help version of the procedure and the Learning Center version of the procedure.

In Flare, we created two style sheets, two Destinations, and two Targets. At build time:

- **Help Center (HC) Content**: We configured Flare to apply the HC style sheet and other target HTML5 settings. Non-Help Center content was excluded from the build. Flare published the output to the HC location on the web server.
- **Learning Center (LC) Content**: We configured Flare to apply the LC style sheet and other target HTML5 settings. Non-Learning Center content was excluded from the build. Flare published the output to the LC location on the web server.

Learning Center procedural lessons were published to the web server as HTML Files. To use the content, the instructional designers created a lesson in the LMS platform (Skilljar). They used an embed code to call the URL of the Learning Center-version of the HTML file that we created in Flare. When a customer was working on a course, we configured our Skilljar platform to display the HTML file that we created in Flare in a window within the Skilljar lesson frame for a seamless learning experience. It looked like the content existed in the Learning Center like all of the other video lessons and product simulations that were part of the learning module when in fact it was sourced from another location outside the Learning Center altogether.

In the Help Center, the procedural content looked like all of the other topics regardless of whether or not its content was reused in the Learning Center. A side benefit of having a Learning Center was that we were able to repurpose the video walkthroughs and simulations created for many Learning Center courses and include them in relevant Help topics. The content flowed in both directions creating a richer reactive and proactive learning experience for all customers.

Building Confident, Self-Sufficient Product Users

Fortunately, we were able to use customer satisfaction and support tickets to track the success of implementing the Help Center and Learning Center. The first year after the Help Center went live, we reduced the total number of training-related support tickets by 20%. The second year that the Help Center was live, we reduced training-related support tickets by another 30%. The Learning Center's go-live had similar positive results.

Having a structured customer onboarding learning plan shortened the onboarding phase significantly.

> **The first year after the Help Center went live, we reduced the total number of training-related support tickets by 20%. The second year that the Help Center was live, we reduced training-related support tickets by another 30%.**

By thoroughly and thoughtfully planning our content model, we were able to create a predictable learning experience for our customers with a professional, familiar, and welcoming tone and voice. Ultimately, our small but mighty team built confident, self-sufficient users who were happy, healthy, referenceable customers. We succeeded by writing once and focusing on reuse for reactive and proactive learning. ■

JULIE BADGER has spent more than two decades in the software space. With a career focused on business software, she's worked with multiple verticals including transportation, retail, legal, and healthcare. Her roles have spanned technical support, QA, documentation, training, and product management, but she always finds her way back to documentation and training. She enjoys building communities of confident, self-sufficient software users by providing them with the right content in the right format at the right place and time. When she's not at work, Julie enjoys designing and creating custom handbags and geeking out in her very high-tech, well-stocked craft room.

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Teaching User Documentation through Structured Authoring

By Michael Opsteegh | Fellow

Structured authoring techniques can be essential in teaching students effective methods of developing user documentation.

Technical and professional communication students can benefit from structured authoring methods. Using structured authoring methods, students learn to compose and arrange their content to make it more usable and accessible to their *human readers*. Of equal importance, students also learn to structure their content to make it more usable to their *machine readers*—the content management systems, search engines, chatbots, and generative AI platforms—that humans rely on to locate and serve information.

Like many tech comm instructors (Cleary 2020; Evia, Sharp, and Perez-Quiñones 2015; Gesteland 2020; Duin and Tham 2019; Batova et al. 2016), I use structured authoring to teach students user-documentation methods. This article describes the course I teach and how my students incorporate topic-based authoring and XML to develop more useable content.

Situating the Course and Its Students

In addition to working as a tech comm practitioner, I teach a senior-level "Manual Writing" course at a state university. Although the course title is somewhat anachronistic, the description and learning outcomes are broad enough to encompass new and emergent methods of user documentation.

Early in the semester, I warn students that the content and skills they will develop in this course are unlike those they have developed in other classes—even in their other tech comm courses. I say that I "warn" them because students enroll in the course with a wide range of writing and technical experiences.

Before they enter the Manual Writing course, students' writing experiences are often limited to essays and research papers that are generally presented in a linear format, directed to a narrow audience (usually, an audience of one), and designed to be used once and then discarded. This kind of writing affords students many liberties in the rhetorical choices they make. So long as those choices result in a satisfactory grade, students have little need to care whether the language in their essays is accessible to other audiences or whether the content is navigable or reusable.

The skills and rhetorical liberties described above don't translate well to developing user documentation. User documentation must be directed toward multiple audiences simultaneously. The content must also be concise, modular, reusable, capable of being rendered in multiple media, capable of being easily updated as products or services evolve over time, and capable of being easily translated.

Additionally, many students are reticent to view content separately from formatting, having gone their entire academic lives manually formatting documents as they composed them, and as McShane (2009, 77) puts it, "watching the groovy things Word can do."

Second, as others have noted (Evia, Sharp, and Perez-Quiñones 2015; Gesteland 2020), most of my students are English or creative writing majors who choose to enroll in the professional writing certificate program in the hopes of improving their job prospects after graduating. They may have initially chosen a major they perceived wouldn't be technically rigorous. Suffice to say, their experiences and comfort with technology varies greatly, with some students avoiding unfamiliar technology altogether.

I warn students that the content and skills they will develop in this course are unlike those they have developed in other classes—even in their other tech comm courses.

Since students need to develop multiple skills while learning to develop useful and usable user documentation, I take a "layered literacies" (Cargile Cook 2002) approach to teaching tech comm classes. For example, I often layer the basic literacy of document design with the technological literacy of working with the Styles feature in Microsoft® Word. These two skills overlap nicely, and learning Styles in Word easily translates to other tools and technologies. So too, I layer the rhetorical literacy of topic-based authoring with the technological literacy of XML markup. I'll discuss how these skills complement each other in the next sections.

Topic-Based Authoring

Early in the semester, we start talking about how users need frequent content on-ramps in the form of headings and bite-size chunks that fit their busy lives and scarce attention. Thinking in terms of chunks or modules helps students understand that readers access content seemingly randomly rather than reading help content linearly.

The three basic DITA information types—concepts, tasks, and references—provide a ready framework for thinking of how to separate different types of content into different modules. In class, I refer to *information types* as *topic types* to help students understand and remember the connection between these abstract categories and the modules they're writing.

In structured authoring, every topic has a type, and every type has a convention for the order, form, and content of a topic (Baker 2013, 97). For example, a task topic requires a heading, often a short introduction for context, steps, maybe some feedback, and notes or warnings. This need for topics to conform to a structure is where the XML comes into play.

XML

The purpose of XML tagging is threefold. First, it's an exercise whereby students identify the elements within their content. In high school English classes, students are often asked to use different colors to highlight their topic sentences, supporting evidence, and conclusions in an essay. This activity requires students to think about what they've put on the page, how elements relate to each other, and what purposes they serve. In this same way, applying semantically-relevant XML tags gives students a language in which to think and talk about what they've composed. And once they can articulate it, they can begin to understand it more clearly.

Second, XML forces students to think more intentionally about the organization of the content that they're presenting to users separately from design. They begin to recognize that the rhetorical flexibility they had in writing essays is now counterbalanced by the requirement to conform to the XML schema.

Third, as the XML imposes structure and order on their own writing, they begin to see how XML can be used to standardize content production across large teams.

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Following is the document type definition (DTD) that I give students to paste at the beginning of their XML files.

```
<?xml version="1.0" encoding="UTF-8" ?>

<?xml-stylesheet type="text/css" href="https://
web.csulb.edu/~mopsteeg/engl418/
structuredAuthoring/structuredAuthoring.css" ?>
    <!DOCTYPE document [
    <!ELEMENT document (title, introduction+,
        (section|topic)+)>
    <!ELEMENT section (sectionTitle, introduction+,
        topic+)>
    <!ELEMENT topic (topicTitle, introduction+,
        (steps|list)*)>
    <!ELEMENT steps (step+)>
    <!ELEMENT list (listItem+)>
    <!ELEMENT step
        (#PCDATA|action|note|warning|result)*>
    <!ELEMENT listItem
        (#PCDATA|action|note|warning|result)*>
    <!ELEMENT title (#PCDATA)>
    <!ELEMENT sectionTitle (#PCDATA)>
    <!ELEMENT topicTitle (#PCDATA)>
    <!ELEMENT introduction
        (#PCDATA|note|warning|list)*>
    <!ELEMENT result (#PCDATA|action)*>
    <!ELEMENT note (#PCDATA|action)*>
    <!ELEMENT warning (#PCDATA|action)*>
    <!ELEMENT action (#PCDATA)>
```

The DTD defines the order and structure of the document by defining every allowable element and enumerating what each element may contain. The first couple of lines declare the XML file and reference the CSS file that controls the display of the XML in a web browser.

However, if we look at one of the lines prefaced by !ELEMENT, we can see how the DTD enforces rules about the content. For example, the "topic" element must include a title, one or more lines of introduction, and may include steps or a bulleted list.

This DTD is rather rudimentary, and students dislike how restrictive it is. However, if I were to add more flexibility in the form of substeps, for example, the complexity of the DTD would become too cumbersome for most students. Since this assignment is intended only to introduce the concept of structured authoring to students, this simple DTD does the trick.

The Assignment

To help frame the project for the students, I describe a scenario in which they are a member of a large tech pubs team that publishes the same content in multiple outputs. We spend a few weeks on the project and approach it in two stages.

In the first stage, students are asked to draft a brief set of user documentation in a word processor. They may write on any subject, but they must focus on organizing the content into several tightly related task-based topics. Students are instructed to limit their writing to 40 steps arranged in 4–6 topics, so they must resist the urge to write lots of content and instead focus on structure. These limitations are helpful, too, to reduce the stress of later applying the XML markup.

After the students have drafted their content and exchanged feedback with their peers, I provide feedback on their drafts, particularly in areas where their content won't fit the schema the DTD enforces. I find that taking the time to look at the drafts before the students begin tagging the document saves everyone a lot of stress later.

In the second stage, students add XML tags to their instructions using Visual Studio Code or a text editor of their choice. To begin, students must paste the DTD at the beginning of their file and then apply XML tags, based on the elements specified in the DTD, to every piece of content in their file.

After the document is tagged, students QA their work by opening the file in a web browser. This gives them the opportunity to review the content and see what happens if they've misidentified a piece of content.

Before they can submit the file for a grade, they must submit it to an online validation site to ensure their XML is well formed and valid. They must work through all the errors the validation site finds until all the errors are resolved. If a student submits an invalid XML file, I promptly return it with a hint about why it failed validation and ask the student to resubmit the corrected file.

While the students can use any text editor to tag their XML files, I use Oxygen XML Editor to view them. Oxygen has a reasonably priced academic license, it features a built-in validation tool, and it enables me to open the file in a web browser with one click.

Student Feedback

I've been assigning and refining this project for about five years. Students rarely mention the XML project in their course reviews. When they do, it's often a sarcastic comment along the lines of, "this is a writing class, not a coding class." However, when former students reach out to me on LinkedIn to share their work experiences, they frequently cite the XML project as one of the most valuable lessons they took from the class, because they were able to apply the concepts of structured authoring immediately to their work.

> **[W]hen former students reach out to me… they frequently cite the XML project as one of the most valuable lessons they took from the class.**

Conclusion

In my Manual Writing class, we talk a lot about DITA without actually mentioning DITA by name. This is intentional, because it allows the students to develop a rhetorical literacy of structured authoring and a technological literacy of XML markup without getting hung up on the esoteric aspects of DITA.

In this article, I have presented approaches and materials I've developed for my course. You are free to use them or adapt them for your own course. If you have questions about teaching tech comm courses through structured writing or want to share your own ideas, I'd love to hear from you. ■

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The ISO Plain Language Standard: A Tool for All Writers

By Daniel Maddux | Member

The new international standard released last year serves as a valuable resource for technical communicators as they help their organizations grow toward clear communication.

In June 2023, the International Organization for Standardization (ISO) released ISO 24495. This new standard provides an international benchmark for how to communicate in plain language. It serves as a tool that writers of all sorts of content can use as they strive to communicate in such a way that users can find, understand, and use the content they need.

Technical communicators have been striving to communicate clearly since the beginning of the profession. However, until last year, there was no international standard on plain language. When technical communicators wanted to refer to a globally agreed-upon set of principles, they had to patch together bits and pieces of plain language guidance from research and guidance from governments. Those who rely on international standards had no solid plain language content to consult. This damaged the credibility of those who specialize in plain language and could impact the usability of published text. For more information on why the standard was created, see An ISO Plain Language Standard.

Initially, a drafting group for ISO's Technical Committee 37 came up with proposed content. The work then passed into the hands of Technical Committee 37's Working group 11. This group was responsible for revising, approving, releasing for publication, and publicizing the new standard.

Members of some of the key worldwide plain language organizations combined to create and release the standard. These contributors spanned several continents and countries, ensuring that the standard represented the perspectives of communicators in a variety of contexts. For more information on how the standard was created, see The ISO plain language standard. The group that prepared the standard for publishing is now working to expand its scope and visibility.

After the text was ready, the working group communicated with the ISO organization to ensure that the standard would be published. After many months of work and online meetings, the standard entered the real world!

The standard was available for purchase online. Various shared licensing plans are available for individual users as well as those who want to share it with users across their organization.

What Stands Out

Perhaps the key to understanding the standard is to realize that its creators didn't reinvent the wheel. The standard lays out many principles that are familiar to all qualified technical communicators.

For example, the standard begins with the fundamentals of audience and purpose analysis. While I can't provide the text here, the principles will be familiar to you. The document focuses on understanding the users' context, and on ensuring that they will be able to find the good content you're producing. I'm sure we've all experienced the frustration of finding that our good, useful content has been placed out of the reach of those who need it most!

This new standard, ISO 24495, walks through the principles involved in using good headers, choosing the right words, and writing clearly at both the macro and micro levels. Though much, much shorter (just over 21 pages) than a traditional technical communication textbook, the standard's table of contents will look familiar to those who have pursued formal or informal technical communication education.

This new standard, ISO 24495, walks through the principles involved in using good headers, choosing the right words, and writing clearly at both the macro and micro levels.

The document closes with guidance on evaluating the effectiveness of your content. Many times, I have been disappointed to find that an employer or client isn't interested in finding out whether the content we're creating accomplishes its purpose. Perhaps having an international standard will aid us in pressing for our work to be evaluated?

One interesting point is that, in some ways, most ISO standards don't follow the plain language standard. Specifically, most standards are not written in the second person. Thus, they may state that "the user should do X" rather than "(you) Do X". I hope that the new plain

language ISO standard will have a positive effect on the usability of other ISO standards in the long term.

Perhaps the main surprise in the standard is the guidance it provides on using (or rather, not using) readability scores. You may have used the readability scores built into Microsoft Word or another tool. The standard points out the shortcomings of these scores. Basically, these systems can't diagnose whether or not text is well written; they simply do math. Just because you use short words and sentences doesn't mean that your audience will get what they need from your content.

I've found that usability scores can support my suspicion that text is needlessly wordy and grammatically convoluted. But the standard makes clear that math alone does not determine whether users will be able to understand what you've written the first time they read it.

> **Perhaps the main surprise in the standard is the guidance it provides on using (or rather, not using) readability scores.**

In short, if you are a competent technical communicator, you're probably already following most of the standard. It can still help you make sure no gaps exist in your knowledge of plain language and serve as a reference when someone questions whether or not you know your stuff.

What's Next

Organizations have begun investing in the standard, which has produced some positive effects.

For example, a technical communicator I know recently encountered a communication challenge at the company he worked for. He had worked with various groups in the company to create a manual, which was now in the approval phase.

One of the engineers he had worked with began to voice strong objections to the tone of the manual. The document used a natural, conversational tone for most of the content. The engineer wanted the content to be more formal, so that they would sound smarter.

> **When pressed to change the way the entire manual was written, the technical communicator referred to ISO 24495 as the authoritative standard for how to communicate clearly in technical documents.**

When pressed to change the way the entire manual was written, the technical communicator referred to ISO 24495 as the authoritative standard for how to communicate clearly in technical documents. Since engineers in the technical communicator's industry are used to following ISO standards, this argument seemed to be effective. For more information on ISO 24495, see ISO 24495-1:2023. ■

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An Exploration of the Oxford Comma

By Rachel Holmes | Student Member

Although no universal rule exists, the Oxford comma has developed a strong reputation for controversy, among editorial experts and novices alike.

The Oxford comma, also known as the serial comma, serves as the last comma in a series. It typically appears after the word *and* or *or* prior to the last item in a list. A series can be either (1) simple—meaning it is short and easy to understand—or (2) complex—meaning it may contain multiple conjunctions or clauses:

1. The American flag uses the colors red, white, and blue (with the Oxford comma appearing after *white*).
2. Every morning, I wash my hair, brush my teeth, and cook and eat breakfast (with the Oxford comma appearing after *teeth*).

Because no universal rule exists whether to use the Oxford comma, it has developed a strong reputation for controversy, even among those who are unfamiliar with editorial nuances. From meme culture to TED Talks, from dating profiles to song lyrics—even being the center of a $5-million labor lawsuit settlement in 2017—the debate over whether to use the Oxford comma has permeated every corner of American culture. Despite the heated arguments between laypeople and experts alike, a technical communicator must take a clinical approach to Oxford comma usage.

In fact, the reader of this article will notice the author's own preference toward using the Oxford comma. This article explores key differences between style guides throughout specialties and geographical regions, as well as the potential impacts of cultural and technological influences on the comma's usage. The exploration offers editors, writers, and technical communicators insights into how they should think about their writing and editorial decisions.

Style and House Guide Recommendations

Many attribute the Oxford comma's first appearance in style guides to the English printer Horace Hart. In 1905, Hart updated his style guide for the Oxford University Press stating, "Commas should, as a rule, be inserted between adjectives preceding and qualifying substantives" (37). This change seemed to trigger a similar style in the U.S. *The Chicago Manual of Style (CMoS)* released their first edition in 1906, stating, "Put a comma before and, or, and nor connecting the last two links in a sequence of three or more" (46). It wasn't until 1978 that Peter Sutcliff gave the comma the name "Oxford Comma" (5), though he credited editor F. Howard Collins who wrote in *Authors' and Printers' Dictionary*, "Insert after each adjective (except the last) preceding and qualifying a substantive, as 'he was a cautious, eloquent, intrepid, and wise man'" (307).

Today, most American English style guides recommend that writers always use the Oxford comma, including CMoS, *American Medical Association Manual of Style* (AMA), *U.S. Government Publishing Office Style Manual* (GPO), and *Modern Language Association Handbook* (MLA). Beyond these, many global corporations headquartered in the U.S., including Microsoft and Apple, indicate in their house styles that writers must use the Oxford comma. The *Associated Press Stylebook (AP)* (2019) is perhaps one of the only American style guides that states the writer or editor should decide when to use the Oxford comma: "Use commas to separate elements in a series, but do not put a comma before the conjunction in most simple series" (323). Primarily, journalists or public relations writers tend to reference the *AP Stylebook*, while technical communicators and business writers typically use a variety of style guides such as *CMoS* and *MLA*.

> **Today, most American style guides recommend that writers always use the Oxford comma.**

Despite the Oxford comma's first attribution in the UK, many British English—as well as Australian and Canadian—style guides and house styles indicate that writers and editors should omit the Oxford comma in most situations. The Australian government says, "Restrict the use of the Oxford comma" (2023). The Canadian government concurs, stating, "Place a comma before 'and' and 'or' only if it will help people understand a list of items in a sentence" (2020). Oxford University's style guide, *New Hart's Rules*, recognizes its history with the Oxford comma, saying, "For a century, it has been part of Oxford University Press style to retain or impose this last comma consistently, to the extent that the convention has also come to be called the Oxford comma" (Waddingham 2014). However, *New Hart's*

Rules doesn't clearly indicate to use or avoid the Oxford comma, saying simply, "The general rule is that one style or the other should be used consistently," before it provides multiple examples of when *to* use the comma—yet provides no examples when to omit.

In general, style guides and house styles that support the Oxford comma say it prevents ambiguity. Those that omit the Oxford comma in certain cases agree with this logic, suggesting that writers should only include it when a sentence risks clarity. Yet, when a style guide states that a writer may choose to use the Oxford comma, it doesn't indicate why writers *shouldn't* use it, only when they should. See **Table 1** for details from each of the aforementioned style guides regarding usage of the Oxford comma.

Arguments Supporting and Opposing the Oxford Comma

Style guides are not the only authoritative sources calling the Oxford comma necessary for clarity. Lasch calls it "almost universally preferred, at least in the United States" (Lasch 2002). Marcello says that leaving out a serial comma "invites misunderstanding" (Marcello 2020). Follett synthesizes these ideas: "One must question whether the advantage [of saving space] outweighs the confusion the omission causes... Inclusion can never confuse" (Follett 1966). Countless other American modern English usage books all come to the same conclusion: the best way to guarantee a lack of confusion in a series is to include the Oxford comma.

Despite the arguments in the U.S. for using the Oxford comma in most prose, newspaper house styles around the world omit it. *The New York Times* says eliminating the comma has a "more rapid feeling in the prose" (Corbett 2015). The BBC concurs: "[Commas] can also create unnecessary clutter and may often be avoided." While not a direct source, the *McMaster University Editorial Style Guide* (2019) follows the *Canadian Press Stylebook* and bluntly says, "We don't use the serial comma" and concludes the discussion on commas with the advice, "When in doubt, err on the side of too few commas" (2016, 27). These recommendations starkly contrast the advice seen in most American style guides.

Table 1: Style Guide Requirements for the Oxford Comma

Style Guide	Required	Details	Entry Reference
CMoS	Yes	When a conjunction joins the last two elements in a series of three or more, a comma—known as the serial or series comma or the Oxford comma—should appear before the conjunction. Chicago strongly recommends this widely practiced usage, blessed by Fowler and other authorities... since it prevents ambiguity.	6.19
AMA Manual of Style	Yes	Use a comma before the conjunction that precedes the last term in a series to prevent ambiguity; this is often referred to as a serial comma or Oxford comma.	8.2.1.2
GPO Style Manual	Yes	After each member within a series of three or more words, phrases, letters, or figures used with and, or, or nor.	8.46
MLA Handbook	Yes	Use commas to separate words, phrases, and clauses in a series. The final comma in a series is known as the serial (or Oxford) comma.	2.12
AP Stylebook	No	Use commas to separate elements in a series, but do not use a comma before the conjunction in most simple series.	—
Australian Government	No	If the last item combines two words or phrases with the word 'and', use a comma before that final item. This use of the comma is known as the 'Oxford comma' or 'serial comma'.	—
New Hart Rules	No	The general rule is that one style or the other should be used consistently. However, the last comma can serve to resolve ambiguity, particularly when any of the items are compound terms joined by a conjunction, and it is sometimes helpful to the reader to use an isolated serial comma for clarification even when the convention has not been adopted in the rest of the text.	4.3.5
Canadian Government	No	Remove unnecessary commas to make web content easier to read... Place a comma before "and" and "or" only if it will help people understand a list of items in a sentence.	—
Apple	Yes	Use a serial comma before and or or in a list of three or more items.	—
Microsoft	Yes	Use a comma before the conjunction in a list of three or more items. (The comma that comes before the conjunction is known as the Oxford or serial comma.)	—

Likely, the practice of eliminating the Oxford comma dates back to the days of typesetting and ink costs. According to *The New York Times*: "News writing has traditionally omitted the serial comma… perhaps to save time and effort in the old days of manual typesetting" (Corbett 2015). Indeed, journalists working with strict character counts and space limitations may look for every advantage to save space, seeing a simple series as an easy place to start. Follett calls this reasoning the only logical argument to omit the Oxford comma (Follett 1966). Yet, modern newspaper editors and journalists don't mention such reasons in today's discourse. Instead, their argument has shifted toward clarity and the true meaning of an article. Carballo et al. say, "Brevity rules over clarity in journalism," suggesting that writers should sacrifice some details in favor of getting to the point (Carballo 2022). And Perlman believes, "We've become less passionate in the fight over the Oxford comma, because it's usually not about the comma at all. It's about intent and clarity" (Perlman 2017). Certainly, some journalists more directly oppose the Oxford comma. Sommer calls it, "Clunky, choppy and unnecessary" (2022). Blake equates mandatory usage to mindless cluttering (Blake 2019).

> **Consistency ties in very closely with the idea of credibility.**

In summary, advocates of the Oxford comma claim that it maintains clarity and consistency. Opponents say it clutters a simple series. Despite the passionate statements on both sides of the argument, it appears few to no true studies have been conducted to understand how the Oxford comma impacts clarity or ambiguity. Therefore, technical communicators and editors must decide for themselves whether the Oxford comma makes a statement clearer. This challenge raises an interesting dilemma: editorial nuances aside, who decides whether a series is clear and simple or complex and ambiguous? An author may write something and consider it straightforward, yet an editor may inquire for details to clarify the copy. Similarly, an editor must consider how an audience will interpret the content before making editorial changes. Decisions regarding the Oxford comma are no exception; in situations where it may be considered optional, editors must diligently investigate the purpose and intent surrounding a sentence before deciding whether to add or delete.

Clarity for the Known and Unknown Audience

All technical communicators should agree that any written or editorial decision must start with the audience of the content. As Hamlin et al. point out, "For most technical communicators, audience is the most important consideration in planning, writing, and reviewing a document" (Hamlin et al. 2022). By deeply understanding the audience, communicators can carefully craft and present their message clearly and succinctly. But researchers such as Mathes and Stevenson believe "unknown or unanticipated audiences" impact how writers identify their audience, and there may be audiences in addition to the ones that a writer initially plans for (Mathes and Stevenson 1976).

Nearly 50 years after Mathes and Stevenson's claim, the "unknown audience" has exponentially expanded. The nature of our interconnected, digital world means that a real audience is most likely an interspersed, global community. This global community can read or access content anywhere in the world. They may rely on audio readers, AI, and automatic translations into a native language to consume information. Consumers may read summarized takeaways, shared screenshots, and out-of-context quotes. With this global and technological viewpoint, determining whether the audience will find the content clear—and therefore, whether to implement or omit the Oxford comma in a series—becomes a much harder question to answer. Because large language modeling and translation AI is still in its infancy, it may be many years before researchers understand the impact of punctuation on the accuracy of natural language processing models for automatic language detection and translation.

Furthermore, editors and authors alike agree on the importance of consistency in writing. Consistency—one of the commonly prescribed "Cs" in technical and business writing—helps an audience more clearly understand content while making it appear polished

and professional. Consistency ties in very closely with the idea of credibility. The more errors or editorial inconsistencies, the more likely it erodes trust and understanding for the reader. A style guide or house style helps to solve these problems, giving editors and authors clear and consistent grammar rules that create a better experience for readers and build credibility for the author. Thus, an ambiguous rule surrounding a grammar decision—such as only including the Oxford comma when it improves clarity—embeds subjectivity into the grammatical decision. Even though these decisions may seem small, they impact consistency throughout the piece. For every decision whether to include or omit an Oxford comma, the editor must weigh two variables: whether the sentence is simple or complex, and whether the decision will appear consistent to the audience. Despite an editor's best intentions, the audience will interpret editorial decisions based on their own understanding of a sentence's purpose and the piece's consistency.

Conclusion

Editors, authors, and technical communicators can leverage this commentary to understand that choosing when to use the Oxford comma isn't as simple as a stylistic preference. Additional studies that focus on the Oxford comma and its usage may prove valuable for communicators and style guides alike about whether to keep the Oxford comma optional in simple series or require it in all cases. Studies could include: how much space a writer actually saves when omitting the Oxford comma in an article or newspaper; the impact of readability and flow on a diverse set of participants when using the Oxford comma; the differences in attempting to eliminate lists versus keeping a long series; and how punctuation impacts language translation, especially with the rise of automatic translators such as Google Translate or generative AI services such as ChatGPT.

Grammar rules—spoken and written—constantly change. Not too long ago, typographers used double spacing after each sentence. Yet *CMoS* began recommending single-space formatting in 2003: "A single character space, not two spaces, should be left after periods at the end of sentences" (61). Similarly, the UK avoids using the Oxford comma today even though it originated the rule over a century ago. Until various style guides agree upon a globally accepted standard, the discrepancies and arguments regarding the Oxford comma will continue among technical communicators, editors, and writers. If an editor follows a style guide that calls to omit the Oxford comma, they may need to come up with strict guidelines to qualify a list as complex or simple. Others may find ways to limit the use of complex series altogether. While clarity and consistency will remain at the center of these conversations, communicators must also consider the global environment, emerging technologies, and how a true audience will interpret their work. ■

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RACHEL HOLMES is a Master's student in Rhetoric, Composition, and Professional Communication and a graduate research assistant at Iowa State University. She holds a Bachelor of Arts degree in English with an emphasis in Rhetoric and a minor in Technical Communications from Iowa State University. Her interests include technical communication, technical editing, visual communication, and generative AI, specifically AI applications within business communications and workflows. Prior to her graduate studies, she served as an accomplished content professional in the technology space at start-ups and global organizations.

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Hiring Trends in Technical Communication

By Jack Molisani | Fellow

A snapshot of the latest trends, methods, and technologies sought by technical communication hiring managers.

Every four years or so, I survey hiring managers about which authoring tools they are using and what they look for when hiring a technical writer (regarding tools, as opposed to soft skills like interviewing or negotiation skills). Here are some recent findings.

Number of Job Openings

I started each survey by doing a search of "technical writer" on the major job boards, looking for an indicator of how many companies are hiring. (Keep in mind that over the years job titles have evolved into such names as "information engineer," "content developer," etc. Such names would not be included in my brief title search.) A search for "technical writer" on CareerBuilder, DICE, and Monster returned:

	2006	2020	2024
Career Builder	474	672	6,985
DICE	833	237	148
Monster	1,000	2,561	*

A search for Technical Writer jobs that also had "DITA" returned the following ("DITA" was not included in the 2006 search):

	2006	2020	2024
Career Builder		672	85
DICE		237	9
Monster		2,561	*
Indeed		330	47

** No longer shows search totals*

Out of curiosity, I searched Indeed for just "DITA" and it returned 97 results. The job titles included "DITA Specialist," "Knowledge Management Developer," and "Technical Writer," illustrating my earlier point that other job titles would not be included in my search for just "Technical Writers."

Not being able to find meaningful trends from any of the above numbers, I assume the results are more

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indicative of how popular the job platforms are, rather than the actual number of job openings in our field.

I then turned to a source of data that might be more dependable, the U.S. Bureau of Labor Statistics (BLS). Searching the BLS website for "Technical Writer" returned the following in their *Occupational Outlook Handbook*.

Quick Facts: Technical Writers	
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	Less than 5 years
On-the-job Training	Short-term on-the-job training
Number of Jobs, 2022	53,300
Anticipated Employment Change, 2022–32	+3,700

Source: https://www.bls.gov/ooh/media-and-communication/technical-writers.htm#tab-1

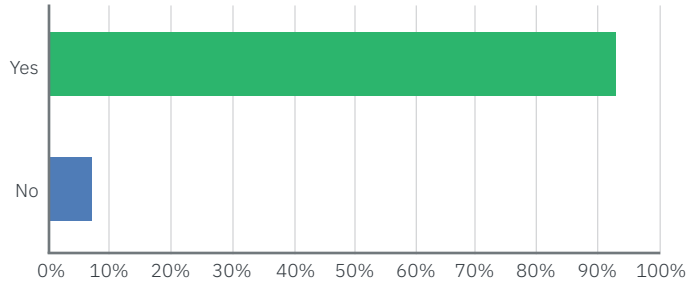
The bad news is I couldn't find previous years' data on the BLS website, but the good news the BLS predicts a 7% growth in our field over the next 10 years! I'll use these numbers as a baseline for my next periodic survey.

Survey Results

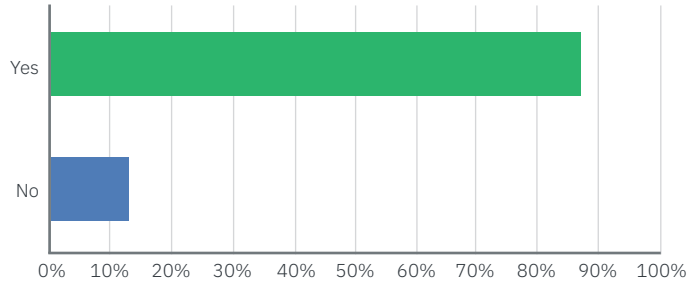
In the survey, I posed the following questions to documentation managers. The source of historical data included members of the STC Management Special Interest Group (44 respondents). The Management SIG unfortunately no longer exists, so for 2024, I posted the survey to the LinkedIn Documentation and Technical Writing Management group (24 respondents). Here are the results.

Note: The limited number of responses may not be an exact reflection of the industry as a whole.

Does your company publish documentation and/or User Assistance (UA) online?

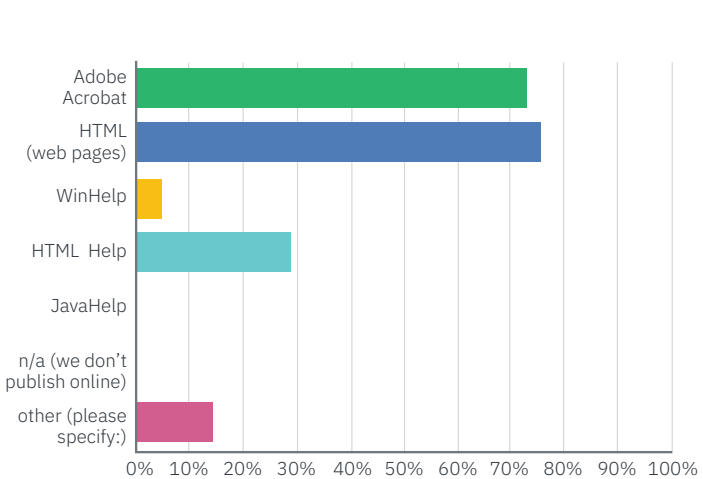


2020

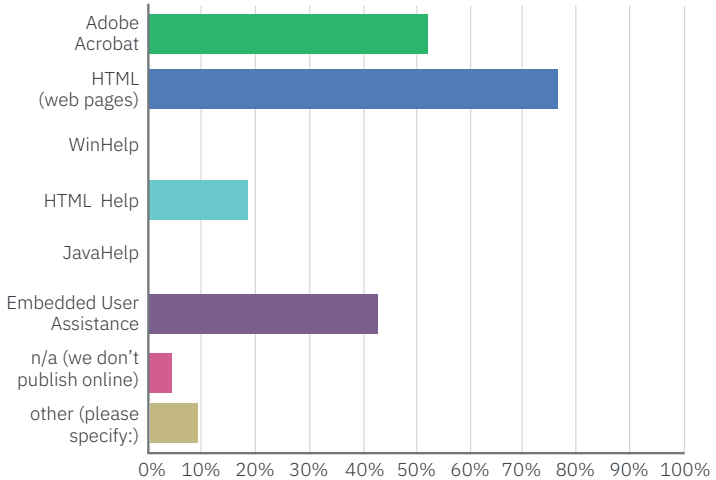


2024

If so, in what formats?

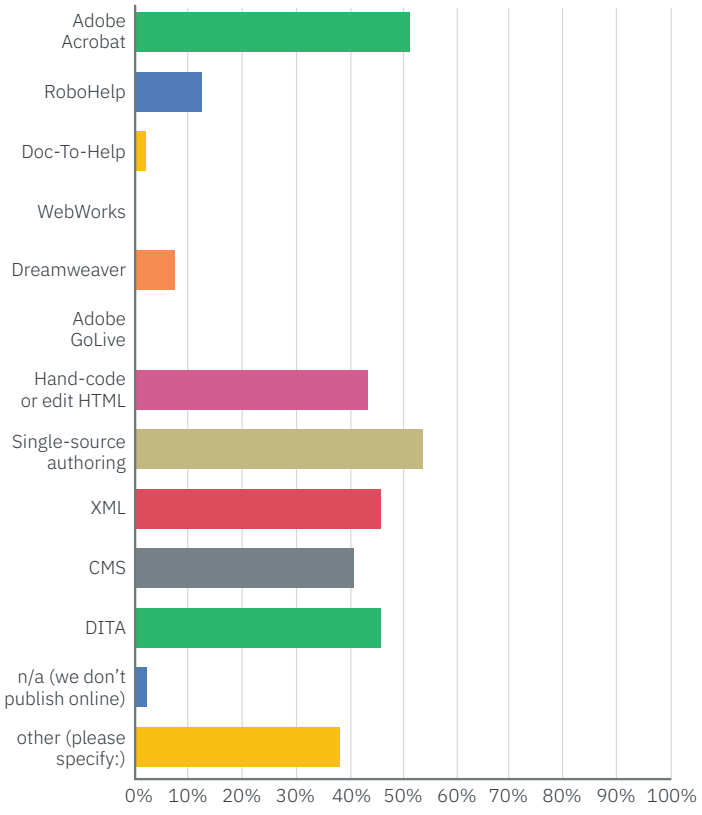


2020



2024

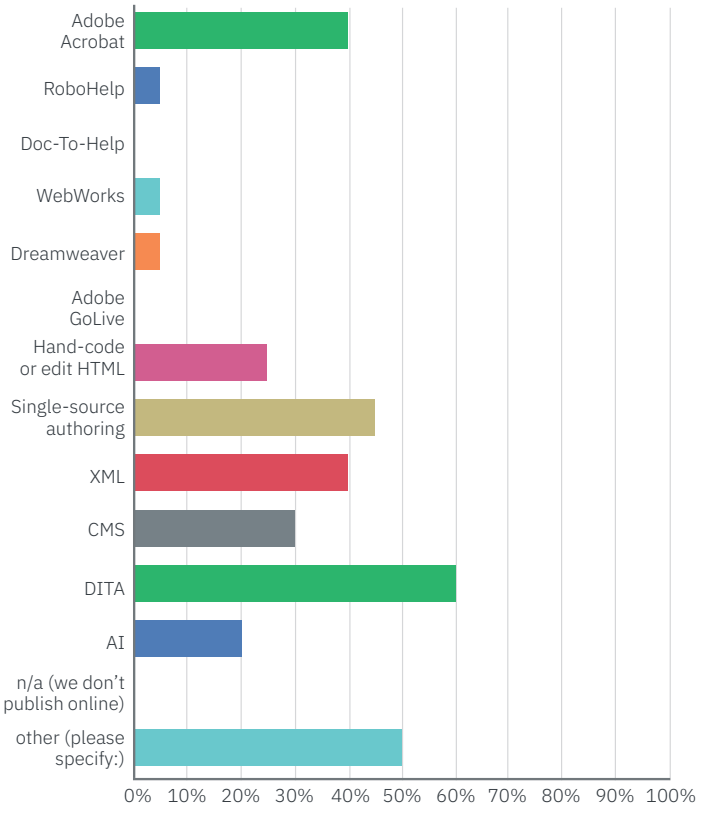
Assuming you were hiring, which authoring tools/technology would you want the UA writer to know? *(Select all that apply)*



2020

Other (please specify):

- *MadCap Flare, FrameMaker, InDesign*
- *MadCap Flare*
- *Confluence*
- *InDesign*
- *MadCap Flare*
- *Wiki*
- *Confluence/wiki, Camtasia/video*
- *Microsoft Word and Visio are key for us.*
- *Confluence*
- *Knowledge base, wiki authoring*
- *Flare*
- *Madcap Flare, oXygen XML*



2024

Other (please specify):

- *Wiki-based platforms like Confluence or CXone Expert (Mindtouch),*
- *Topic-based authoring, minimalism, writing for translation, and soon - GPT optimization*
- *(in order) MadCap Flare, Confluence (yes, as an authoring tool), FrameMaker, MS Word, MS Excel*
- *Figma*
- *Markdown, git, oss*
- *Oxygen Author, but DITA experience is the main thing*
- *They don't have to know them - but they need to be familiar with them*
- *MadCap Flare*
- *RWS Tridion Docs (suite), Markdown, Acrolinx, Schematron*
- *Familiarity with SOME tool: if they can learn one, they can learn another; I'm more interested in other specific skills.*

Which tools/technologies/knowledge will writers need to know in the future?

2020

- All the Microsoft products and WordPress.
- BPMS, real estate accounting, financial management
- Categorization of information (information mapping or information "chunking")
- Confluence
- Designing content for and writing content for mobile devices.
- DITA, CCMS, DITA XML authoring tools such as oXygen
- Doesn't matter, content matters. No tools alone will provide sensible assistance. Single sourcing and content re-use will survive the longest.
- HTML5
- In addition to DITA, XML, and HTML, Knowledge Base authoring, wiki authoring, graphics tools, along with expertise in use cases, user journey mapping, minimalism, user experience/design.
- Ionic Framework and Visual Studio

- Javascript
- MadCap Flare
- Markdown, GitHub, asciidoctor
- Mobile authoring and presentation, content delivery from one device to another (IoT: if your refrigerator is truly talking to your grocery store, what should it say?) metadata, preliminary info about big data/data sciences
- MS office, Adobe FrameMaker,
- Multi-source publishing
- Scripting, Python
- We only publish PDFs so I'm not sure what tools are used.
- XML. CSS. JavaScript. Video production. Social media.

2024

- A basic understanding of one or more tools is enough—if they're a talented writer in user-centered content, they will have the skills to pick up another tool. That said, our tools are super basic, so I can't speak to the more complex options
- Ability to quickly manage and edit a high volume of drafts submitted by product owners who may or may not be good writers, and who may or may not be using AI to produce tech doc.
- AI prompt writing, all open source stacks that can be leveraged to deliver content where needed, esp. git and code navigation
- AI Prompting (How to), DITA, XML, Structured writing
- AI, LLMs
- GPT optimization; Content analytics; User Journey tracking;
- How to use embedded AI-based assistants through the content development workflow
- I think they will need a better understanding of tools associated with AI.
- Structured Authoring Tools: MadCap Flare, Oxygen XML Author, Collaboration platforms: Microsoft Teams, Slack, or Google Workspace Screen Capture, Recording Software: Snagit, Camtasia, Adobe Captivate, Localiz
- Top tool/tech/knowledge: AI Prompt Engineering
- Web based authoring tools in general (e.g., Figma, Google Docs, and yet to come such apps...).

Summary

As the producer of a conference about digital publishing, I observe how trends come and go. A few years ago, *everyone* was saying the future of content delivery was mobile. The next year, the future was all about chatbots. Two years ago, the future was VR and the metaverse. Last year (and this year), the future is AI-enabled *everything*.

I feel the survey results represent what *always* happens in our industry—what's the latest technology to hit our industry? We have to learn that!

Karen McGrane, the author of *Content Strategy for Mobile*, did a great presentation a few years ago called, *Content in a Zombie Apocalypse*. It seems like every time there is a quantum leap in publishing, people run around yelling the corporate equivalent of "The sky is falling! The sky is falling!" No, the sky is not falling, and no, this is not the zombie apocalypse.

Is AI going to take our jobs? I think not. Will it help streamline what we do and increase efficiency? I think so. We as technical communicators document new technology all the time. That's what we *do*. Ditto for learning the latest innovations in publishing technology.

What I glean from the survey data is that hiring managers want you to know the basic tools of the trade, plus structured authoring, plus whatever the latest publishing technology is on the rise (currently, AI).

But that's what we've *always* done, right? ■

JACK MOLISANI is an STC Fellow, and the President of ProSpring Staffing, an employment agency specializing in content professionals (both contract and perm): https://ProspringStaffing.com He's also the author of *Be The Captain of Your Career: A New Approach to Career Planning and Advancement*, which hit #5 on Amazon's Career and Resume Best Seller list. Jack also produces The LavaCon Conference on Content Strategy and TechComm Management: https://LavaCon.org. Connect with Jack on LinkedIn: https://www.linkedin.com/in/jackmolisani/

President's Letter

BY LIZ HERMAN, PH.D. | *Fellow*

The only thing constant is change. As technical communicators, we likely shy away from the use of clichés. While it's convenient to use them, we understand that words matter and we strive to communicate clearly without the use of clichés, idioms, etc. Change, however, is on my mind this month and darn if that cliché doesn't seem to fit.

Because I am thinking about change, I've also been singing "Changes" by David Bowie and "A Change is Gonna Come" by Sam Cooke. Maybe instead of writing about kings and robot overlords (see Tim Esposito's previous President's Letter columns), I will include some song references in future letters. You might expect a lot of 80s music references.

This is my first STC President's Letter. See? Already something is different in this column. I would like to thank Tim Esposito, outgoing Board President and current Immediate Past President, for a remarkable year. His leadership, guidance, humility, and sense of humor fostered a smooth transition from Chief Executive Officer Liz Pohland to Tim Shaw and enabled the Board to accomplish several updates that I will highlight later in this letter. I also want to thank Aiessa Moyna, outgoing Immediate Past President, for her service to the Board. Her work as Chair of the Nominating Committee in a year where we revised bylaws that had a direct affect on the process was exemplary, and I appreciate her careful attention to the details.

Change is difficult. It can be amazing, alarming, upsetting, or uplifting. It can be viewed positively or negatively. Sometimes both depending on perspective. But to change is to grow and evolve and that is what we must do as a Society. To sustain our professional association, the STC staff and Board must seek transformations that continue to provide value while stabilizing and optimizing our financial footprint. There will be adjustments during my term as President. I cannot predict what those may be but know that the Board and the STC staff are committed to the Society and will work diligently to make meaningful and purposeful transformation for its betterment and longevity.

Regarding recent bylaw revisions, I hope you have all had a chance to read the February 1 STC Notebook blog post where Tim Shaw discussed the revisions that were made regarding updating Board member eligibility requirements, including how officers are elected; growing member representation by expanding the size of the Board; and updating the duties, qualifications, and term limits of officers and directors. You can find a current copy of our bylaws on our website: https://www.stc.org/governance/**.** As we make future revisions, we will summarize those and communicate said summary to our members. While you are always welcome to read through the entire bylaws document, we will strive to call attention to the specific revisions that were made.

During my term as President, I am going to explore with the Board and with the STC staff, and with feedback from our members, the optimal processes and best tools that we can implement and use to continue to make STC your professional home. This inevitably means that there will be change. Probably not as much as I think there will be when I reflect on my term, because change, good change, takes time. *Don't stop believin'.* ■

LIZ HERMAN, PHD, is a knowledge management practitioner and is certified in project management and technical communication.

STC Summit 24—Tech Comm in Action

STC's Technical Communication Summit is the premier conference for technical communication education and networking. This year's Summit is all about interactivity—making the audience into the expert, and getting people together to learn, teach, and grow.

The Summit will take place 17–19 May, in Bloomington, MN at the Radisson Blu hotel located at the Mall of America. ■

Schedule at a Glance

THURSDAY, 16 MAY

Registration Open
3:00–6:00 PM

CPTC Foundation Prep Course 1/2
(pre-registration required)
3:00–6:00 PM

Speaker Rehearsals
(pre-registration required)
4:00–8:00 PM

First-Time Attendee Orientation & Tour
5:00–6:30 PM

FRIDAY, 17 MAY

Registration Open
7:00 AM–6:00 PM

Exhibit Hall Open
8:00 AM–5:00 PM

Breakfast and Welcome
8:00–9:30 AM

CPTC Practitioner Prep Course 1/3
(pre-registration required)
9:30–11:30 AM

Education Sessions
9:30 AM–12:30 PM

Box Lunch and Networking
12:30–1:30 PM

Education Sessions
1:30–5:30 PM

CPTC Foundation Prep Course 2/2
(pre-registration required)
1:30–4:30 PM

Annual Business Meeting
5:45–6:15 PM

Networking Happy Hour
6:00–7:45 PM

Dine Arounds
7:45 PM

SATURDAY, 18 MAY

Registration Open
7:00 AM–6:00 PM

Exhibit Hall Open
8:00 AM–5:00 PM

Breakfast and Welcome
8:00–9:30 AM

Education Sessions
9:30–11:30 AM

CPTC Practitioner Prep Course 2/3
(pre-registration required)
9:30–11:30 AM

Awards, Box Lunch and Networking
12:00–1:30 PM

Education Sessions
1:30–6:00 PM

Honors Awards & Reception
6:00–8:00 PM

SUNDAY, 19 MAY

Registration Open
7:00–11:00 AM

Exhibit Hall Open
8:00 AM–12:00 PM

Breakfast and Welcome
8:00–9:30 AM

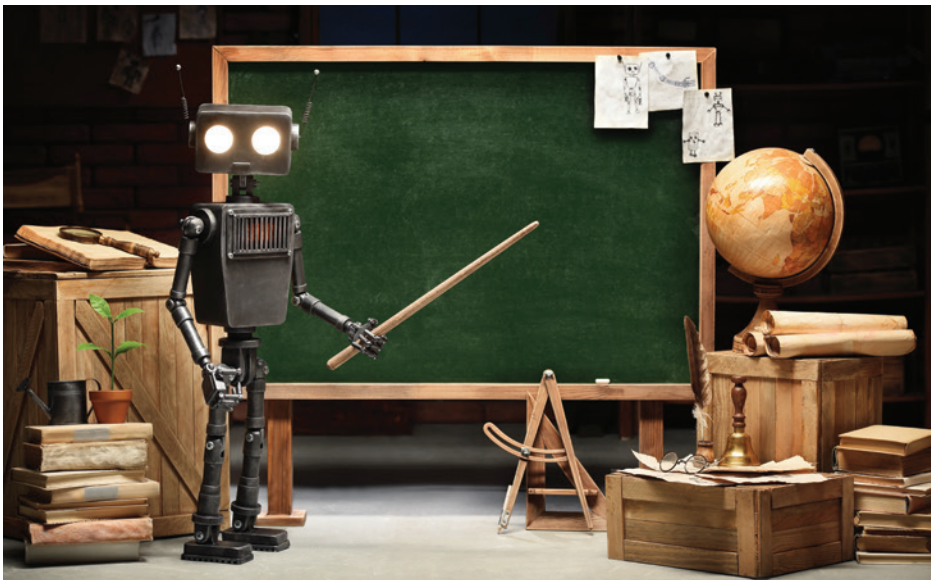
Education Sessions
9:30–11:30 AM

CPTC Practitioner Prep Course 3/3
(pre-registration required)
9:30–11:30 AM

Box Lunch and Networking/ SIG Community Lunches
12:00–1:15 PM

Social Activities
1:30 PM

Four Guidelines for The Effective Use of Artificial Intelligence Writing Tools in Classrooms



BY REGINA PURNELL-ADAMS | *Member*

Generative Artificial Intelligence (AI) has revolutionized the writing concept. As a professor and technical communicator, I have pondered, "How can we leverage AI writing technologies in the classroom?" Based on my experience and research, I'd like to provide a few recommendations.

Generative artificial intelligence writing tools are openly embraced by a growing number of users internationally. This presents as an opportunity to save time by generating ready-made products (e.g. general correspondence, essays, summaries, etc.) that have already been synthesized and refined. Currently, ChatGPT and Gemini are two of the most popular generative AI writing tools used (Marr, 2024). Technical communicators are using AI generated content from these tools to augment and support the products they develop. AI writing tools can also serve as instructional aids in classrooms and seminars.

Despite the increasing use of generative AI writing tools, this technology is still met with some criticisms. How accurate is the data or output? Will responses differ for multiple users submitting the same request? Can plagiarism be controlled? When is it acceptable to use AI writing tools and when is it not? Of the different criticisms, one that has resonated with me as a professor in higher education is, "How can we look at the positive attributes associated with this technology and incorporate standardized practices to benefit educators and students (because there is no going back)?" Many students are eager to use these tools on their academic journey. So, here are four guidelines for instructors to effectively use AI writing tools in their classrooms:

#1 – Incorporate advanced artificial intelligence writing tools once students have mastered effective writing skills.

The skills associated with writing (organization, grammar, argument development, etc.) are still very much needed as those fundamentals are tied to speech too. However, once students can successfully demonstrate these skills, "advanced AI writing tools" can be used as an enhancement mechanism, particularly in higher levels of education. By advanced AI writing tools, I am referring to tools that respond to your "write a paper on XYZ" request in a matter of seconds, with a full human-like document that can span from a few paragraphs to several pages. Ideally, the use of calculators in math classes presents a similar implementation concept. First, students learn mathematical fundamentals without a calculator. Once they have proven that they understand the basic concepts, they "graduate" to using calculators.

Then, the use of a system to provide the solution is welcomed with less resistance because it's more of an aid to be used at higher levels. Of note, if there are a few drastic outliers in the classroom, it can skew when the "right time" for implementation is. Specifically, if some students are below the expected standard for a given level, then instructors might wait to introduce advanced tools that automatically deliver a quick solution.

#2 – Establish clear parameters that work for your classroom.

When analyzing learning objectives, consider if AI writing tools help or hinder students in meeting the desired goal. AI writing tools are more beneficial in certain disciplines/classrooms. For example, in English Composition the use of AI writing tools might be limited. On the other side of the spectrum, if you are a chemistry professor and you want your students to write a quality lab report, AI writing tools might be extremely beneficial. AI writing tools can assist with organizing the material, and generating a draft (Salvagno et al., 2023) to easily input the corresponding technical data.

#3 – Teach students how to properly use AI writing technologies, before you allow them to use them.

AI writing technologies should be used to assist students in their coursework and to support overall learning objectives. In assisting students, AI can come up with a draft (as mentioned in the previous step) and the students can revise the draft to accurately reflect their thoughts and opinions. In reverse, students can develop a draft and use AI writing tools to revise it. Another way to properly use AI entails fact checking. When facts are presented in an AI generated document, it is the students' responsibility to ensure the facts are correct. It is also the students' responsibility to accurately cite their sources (to include revealing whether an AI writing tool was used, which AI tool was used, and for what portion of the assignment). If students are going to use this type of technology, it is important to ensure they have familiarity and expertise with it (Weissman, 2023).

#4 – Evaluate how AI writing tools impact your classroom and adjust accordingly.

The implementation in various disciplines/classrooms will be an iterative process. If you choose to open your classroom to generative artificial intelligence writing tools, do so gradually. For example, start with one assignment that isn't heavily weighted and track the following items:

- Impact on learning objective(s) & students.
- Ease of use.
- Resources: software purchase & the amount of time spent/saved on utilizing an AI writing tool.
- Final quality of the assignment.

Based on what the metrics reveal, instructors can then choose to remove AI writing tools, keep the status quo, or add heavier weighted assignments to their curriculum. Successful implementation of AI writing tools will require instructors to initially "test" its use in the classroom to develop a winning strategy for everyone.

These four guidelines are a mere starting point for how to welcome generative AI writing tools in the classroom. A key concern is that generative AI poses a threat to education (Lo, 2023). However, instead of looking at it as a threat, it may be an opportunity to use newer technologies to elevate writing practices and written products in classrooms. ■

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Dr. Purnell-Adams holds a BA in Chemistry (Ole Miss, 2005), an MBA (Trident University, 2008), and a PhD in Technical Communication and Rhetoric (Texas Tech University, 2018).

How I Found Technical Communication

BY ASHLEY MILLER | *Student Member*

I was lucky enough to discover technical communication in high school. I was enrolled in a specialized, four-year college preparation program for high-achieving students interested in science, technology, or engineering. In my first two years, I developed public speaking and technical writing skills—but I did not know then that what I was doing was called "technical communication." All I knew was that I enjoyed learning and writing about science and technology, but I did not want to be a biologist, chemist, or engineer. Moreover, I loved editing the papers my peers in this program wrote because I could learn something new about the world while applying my knowledge of English grammar and mechanics.

In my junior year of high school, I had the opportunity to shadow and intern with editors at different publishers to explore copyediting in different contexts. I quickly realized that I enjoyed editing science-based articles more than typical journal publications, as science and math were strengths of mine. With that, my interest in and comprehension of technical subjects meant I could effectively edit technical content beyond just proofreading.

Yet, I worried that "science writing editor" was a job I had made up and that I would need to plan for a life spent editing newspapers. Even then, I did not know what to major in to become an editor. I described my dilemma to one of my internship mentors, and she said that I should look into science writing or technical writing. This changed my life.

Suddenly, my college search had direction. I began researching any colleges I could find that promoted a major in technical writing, science writing, or technical communication. After trial-and-error, visiting schools, meeting with advisors, and

From Passion to Profession: One Student's Journey in Technical Communication

BY KYLIE M. JACOBSEN | *Senior Member*

Exploring the Evolution of Interests, Skills, and Career Opportunities

As the incoming editor for this column, NextGen TechComm, I am excited to have connected with Ashley Miller, an STC student member from the University of North Texas. In my role as a professor and STC community leader, I am often asked how to provide effective outreach to students and I think Ashley's story demonstrates how impactful sponsorship and mentorship in the student chapters can be for the future of the profession.

Ashley's article describes how a passion for writing in high school led her to pursue a career in technical communication. As a senior preparing for graduation, she reflects on her college courses and a career-defining moment at STC Summit in 2022. I hope readers find her article to be a refreshing reminder of why technical writers do what they do and are inspired by the enthusiasm of the next generation of STC members and technical communicators.

KYLIE M. JACOBSEN, PHD is an assistant professor of writing at Grand Valley State University in Allendale, Michigan where she teaches courses in business, professional, UX, and web writing. She has been a member of STC since 2012 and serves as a council member for the STC Michigan Great Lakes (MGL) Chapter. Contact: jacokyli@gvsu.edu, https://www.linkedin.com/in/kylie-m-jacobsen/

comparing scholarships, I decided that the University of North Texas (UNT) Technical Communication (Tech Comm) was the program for me.

How My Courses Inspired Me

When I started as a freshman in UNT Tech Comm, I was set on becoming a technical editor. However, the more technical communication courses I took, the more my interests diverged.

UNT Tech Comm's course topics include the following: technical writing, technical editing, procedure writing, proposal writing, user experience research and design, content strategy, visual technical communication, business communication, information architecture, web design, and content analysis. I knew that I would have fun in the class on editing, but I was surprised by how much I particularly enjoyed my courses on user experience and content strategy.

In the Usability and User Experience (UX) in Technical Communication course, I learned how to execute three methods of usability testing: card sorts, think-aloud protocols, and heuristic evaluations. Later, in a class titled Advanced Information Design for Electronic Media, I engaged in the entire UX design process, from identifying a need to prototyping and testing a solution. I love UX design because I can apply my background in psychology to understand and empathize with users and exercise my creative thinking in designing a solution—both aesthetically and functionally.

In the Content Strategy course, I was given the real-world task of comprehensively evaluating the existing content strategy of the UNT Tech Comm website. To do so, I conducted a content audit, interpreted Google Analytics data, interviewed stakeholders, and conducted a competitor analysis. Then, I consolidated my recommendations into a report and a slide deck and presented them to the technical communication department chair. Content strategy became an intriguing discipline to me because recommending new

strategies and approaches to content and design felt like a form of large-scale editing.

I started college with such a vivid career goal, but now, I could see myself enjoying work just as much as a content designer or strategist. I still enjoy editing as much as I always have, but I have realized there are other ways I can apply my eye for detail, understanding of the English language, and interest in science and technology. In exploring different facets of technical communication over the past four years, I have discovered the most exciting technical communication careers for me involve identifying inefficiencies or problems and creating new solutions. These careers include, technical editors, who solve problems within documents; UX professionals, who develop solutions that fulfill audience needs; and content strategists, who recognize ways a message could be better communicated to its audience.

What the Society for Technical Communication (STC) Taught Me

Involvement with STC has provided me with extraordinary opportunities and connections I would not otherwise have as an undergraduate technical communication student.

During my sophomore year at UNT, I was invited to participate in the pioneer mentoring program partnership between UNT Tech Comm and the STC North Texas Lone Star Chapter. I was blessed to be mentored by a technical writer who coached and advised me as I navigated my first in-person semester and began making early career decisions.

Two months into my mentorship, I started volunteering on the STC Lone Star council, assisting with social media and outreach efforts. I was the Social Media Chair for just over a year, designing graphics, writing copy, and revamping the chapter's social media content strategy. Between my involvement as a council member and mentee, I became acquainted with a diverse network of technical communicators—a privilege not many aspiring professionals receive.

In May 2022, the STC Lone Star Chapter graciously sponsored me to represent them at my first-ever STC Summit. There, I learned about different facets of technical communication and networked with professionals of diverse ages, fields, and experiences. Most remarkably, I connected with a senior content strategist who offered me a remote summer internship at the International Risk Management Institute, Inc. (IRMI) as an Editorial Intern.

What's After College?

Combined, all these interests, courses, and networking opportunities led me to pursue a second internship in 2023, but this time as a Technical Documentation Intern at Texas Instruments, Inc. (TI). I created a short YouTube video which discusses my experiences and lessons learned in landing an internship, to share with others. It can be viewed at https://www.youtube.com/watch?v=8fPxTnac_RI.

When I applied my academic education and STC insights, I found these internships rewarding and challenging. For example, I learned how to engage with SMEs in a corporate space, find a sense of purpose in the documentation I wrote, and the value of working a job that makes the jobs of others easier. I hope other solution-focused, user-centered writers leaving high school or newly enrolled in college find their way into a technical communication program like I did. ■

ASHLEY MILLER is a senior at the University of North Texas and will graduate this May with a Bachelor of Science in Professional and Technical Communication and Psychology. She has interned at Texas Instruments, Inc. (TI) and at the International Risk Management Institute, Inc. (IRMI). She has been a student member of the STC North Texas Lone Star Chapter since 2021. Contact: ashleymiller12@my.unt.edu , https://www.linkedin.com/in/ashley-elaine/

How Professional Certification Helped Fast-Track My Career

BY TALIESIN UTZ | *Member*

I am a 20-year-old college student with no publications, no internships under my belt, and no experience working at all beyond freelance construction. Impressed yet? I think not.

You see, that is who I was two years ago. Today, I am an integral part of a technical writing team documenting the flagship product of a leading financial technology company. I am an undergraduate English major at the University of Georgia with three internships under my belt and a full-time technical writing position. And one of the main reasons for my success: the Certified Professional Technical Communicator (CPTC) program.

How I discovered technical writing

My background is that of a typical university student. With a hundred ideas for my future and none truly holding my attention, I spent the first two years of my college life bouncing between possible areas of interest. I started in biology, then changed to political science, and finally settled on English. While many may approve of trying my hand at different fields, I felt that I was losing precious time. It was this realization that I was running out of time that pushed me to find a way to not only regain the time I lost, but also jump ahead of the game.

The answer was certifying myself. Specifically, my search for vocational salvation led me to uncover a technical writing certification program offered by the University of Georgia. With a reasonable investment of time and money, I could acquire a valuable skill set and industry-specific credential not offered in a general undergraduate program.

Why the CPTC Foundation certification?

After completing my certification, I received my first internship as a content editor for an aromatherapy company. While ecstatic at finally being on the right track, it was unpaid and I realized I would need to solidify my foundation in technical writing in order to both become a better writer and competitive hire.

That is why, for my second certification, I chose the CPTC Foundation exam. I chose this certification because of its content and the STC's reputation and networking opportunities.

The Society for Technical Communication (STC) is an internationally recognized certifying body.

CERTIFIED PROFESSIONAL
Technical Communicator
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In my job search, I found companies with technical writing teams that require their technical writers to have an STC certification. In terms of professional development, the STC has a huge community of technical writers willing to teach you through STC workshops and seminars and connect you to job opportunities. Lastly, content. When I first began reading the textbook for the foundation certification, I kept pausing and thinking, "hey, I know all of this already... why am I even reading this?". Well, the answer is simple. Many of us operate with an intrinsic understanding of communication. The foundation certification helps make us aware of that knowledge, transforming each act of researching and writing into a deliberate process. This knowledge means that whenever we face a situation in the technical writing workspace, we already have the requisite knowledge to tackle our work items.

The moment I first realized the usefulness of this certification was when I was in my "Writing for the World Wide Web" course and we were asked to revise online document organization.

Normally, like any self-respecting college student, I would fabricate some elaborate explanations that were only half correct because I honestly could not rationalize the choices I made for the document organization. That changed after several weeks of studying for the foundation certification. I now had a conscious understanding of document guidelines. I could base my choices on an understanding of the five principles of design and also refer back to typical genre organization templates.

It is this ability to consciously apply knowledge that makes the foundation certification so valuable and a key element to progressing toward the advanced practitioner certification.

Why should I certify myself at the Practitioner level?

Whereas the foundation certification is about creating conscious understanding, the practitioner certification is all about applying that comprehension to complex technical writing workplace projects and situations.

This also means an increase in difficulty. In fact, the practitioner certification was very hard to pass, as it tested me on every aspect of the technical writing workplace and process. While I only recently received my practitioner certification, it is clear to me that what I have learned has transformed my writing thought process.

For any member of a technical writing team, the ability to coordinate with others is crucial to both personal and company success. This is something that the practitioner certification focuses on. However, it also prepares you to operate independently. It does this by presenting you with an exhaustive selection of technical writing situations that you must solve as a writer to achieve the best project outcomes.

As a student, I can say that learning through applying knowledge to various situations is better than the rote memorization required by the majority of my university exams.

Combined, these two certifications challenged and validated my skills, demonstrating that I have the experience necessary to write my way out of any situation.

How CPTC certification supports professional development

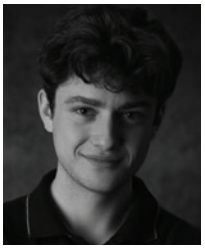
My professional certification was an important part of the career development goals I set up with my manager at the start of my current position. Since achieving that goal, I have not only demonstrated commitment to my chosen field and job, but I have also become a more efficient and skilled writer.

In fact, I have expanded my role from solely writing documentation for two products to doing so for four. My role in my position as technical writer continues to grow, and I can see more opportunities are on the horizon as I leverage my new skills and confidence to achieve ever more professional growth.

Should you do it?

In short, yes. Whether you have recently discovered technical writing or are a mid-level writer with years of experience, gaining a certification through the STC is essential to both establishing and solidifying your technical writing knowledge.

I can honestly say that I never expected to come so far so quickly on my self-given quest to achieve the moniker of "best technical writer". While my own drive and consistency formed the basis for my success, the CPTC certification program played a major role in my reaching my professional goals in record time. ■



TALIESIN UTZ is a fourth-year undergraduate English student and CPTC Practitioner at the University of Georgia. With two years of technical writing under his belt, Taliesin began his writing career as a college sophomore, working as a content editor for an aromatherapy company and technical writer for a software as a service company before settling into the financial technology sector. There, he researches, organizes, edits, revises, and produces user guides and release information for financial service applications. His future plans are to study AI and pursue a graduate degree in digital communication.

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CONTACT

For more information about certification and to start the process, visit *www.stc.org* or email *certification@stc.org.*

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The Certified Professional Technical Communicator (CPTC) credential assures employers, colleagues, and the public that you have the knowledge and skill to handle complex technical communication projects from the project planning stage through production and delivery.

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- Opens up job opportunities and enhances job mobility;
- Elevates the profession;
- Gives you a sense of pride in your career; and
- Demonstrates your commitment to the field.

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Continuing Education Requirements

Points may be obtained the following ways:

Event	Points
STC Annual Membership (any membership type for Foundation certificants)	2
STC Recorded Webinar (self-study)	1
STC Live Educational Webinar (free, sponsored, and community webinars excluded)	2
STC Online Courses	6
STC Summit Pre-Conference Courses (full day)	6
STC Summit Pre-Conference Courses (half day)	3
STC Annual Summit	8
Begin and complete a college-accredited course related to the Technical Communication field	8
Published articles that relate to any aspect of *Technical Communication* (2/article)	2
Published books publicly available on topics related to *Technical Communication* (5/book)	5
Presentations at conferences related to aspects of *Technical Communication* (2/presentation)	2
Total needed within 2 years post-certification date	**12**

Fees

Exam fees: STC Members $297, Non-Members, $594

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